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HUMAN RESOURCES MANAGEMENT. Instalment 4

GUIDELINES FOR

AN INSTITUTIONAL MACHINERY FOR EMPLOYMENT AND

PRODUCTIVITY PLANNING SUBSYSTEM

POLICY ASPECTS AND INSTITUTIONAL MACHINERY FOR POLICY GUIDANCE AND COORDINATION OF EMPLOYMENT AND LABOUR PRODUCTIVITY PLANNING

I. INTRODUCTION

1.1 The need to optimize employment and labour productivity within a nation is the ultimate objective of the distributive aspects of human resources planning and programming for national development; To ensure an effective formulation and implementation of strategies and programmes that would lead to this desired level of optimization, functional national institutional capabilities for policy formulation, coordination and implementation need to be developed and operated. The purpose of this guideline is to develop and suggest a general framework as a specimen for the development and execution of employment and labour productivity policies, plans and programmes at the national level.

1.2 Basically four major outputs are expected from the institution and operation of the suggested framework. They are:

(a) the development of a systematic base for the identification and formulation of complementary manpower utilization objectives and policies for the enhancement of productivity for national socio-economic development;

(b) the development of processed data and information flow systems for planning and executing human resources utilization programmes;

(c) the review/formulation of pre-requisite employment and labour productivity policies;

(d) the operation of a viable administrative machinery to execute the various functions as required by policies to ensure efficient allocation and maximized use of human resources for increased productivity.

1.3 The introduction of this gudeline is not to say that there are no institutional machineries relative to the discharge of the human resource distribution, allocation and ensuring productive use functions: neither is it to imply that there are no employment policies, no related staf to execute and manage the execution of the policies, that the related communication and accountability linkage relationships between units does not exist. On the contr-y Ministries/Departments of Labour are but the oldest institutions established to discharge such functions.

1.4 Not withstanding the prevalence of Ministries/Departments of Labour, unregulated operation of the labour market as manifest in unemployment, under-employment and under-utilization, if not total wastage of human resource has been on the rise in recent past. Phenomena such as brain drain, unregulated migrant labour and recently their mass-expulsion, the wastage of the potential of those on the move- i.e. refugess, or those confined to correctional and educational institution, or slowness in the integration and productive use of women, biases against the use of the youth, the aging, the retired and handicaped is quite prevalent.

1.5 The guideline is therefore less concerned with the custodial functions such as maintenance of industrial peace, labour-management conflict arbitration, workers welfare, employment exchanges for the formal labour wage sector - and social security administration which are adequately undertaken by Ministries/Departments of Labour, but more with the development functions of planning for and maintaining an acceptable level of employment opportunities and productivity, ensuring that all rural and perifery urban sectors have a well planned human resource utilization labour market management and adjustment institutions, that the use of all spectrum of human resource is accounted for, that the logic of and complementarity of tasks in jobs is recognised and applied in preparation of job descriptions, that the related infrastructure of Directories of industrial classification of centres of socio-economic activities and of occupational titles exist in support of employment and productivity planning; and that systematic human resource utilization audit function is enshrined in the labour management and labour market adjustments functions: both of which appear to receive little attention in the wake of existing institutions' pre-occupation with administering labour conventions.

1.6 Thus this Guideline should be seen as indicative of the need to introduce structural adjustments in labour management to reorient existing structure for the introduction of a developmental component to the prevailing custodial approaches to the management of Labour and labour market adjustments. It is an addition to existing machineries; and if necessary, they can function as a unit rather than a full fledged Division within existing labour management and labour market adjustment arrangements.

1.7 The guidelines are divided into six sections including the introduction. Section two contains the broad policy aspects of employment and labour productivity planning followed by the structure of the machinery and summary of terms of reference, functions and outputs. Detailed functions of sections and units are specified in the fourth section while staffing and data requirements for the effective implementation of the identified functions are considered in the fifth and last sections respectively: while the sixth section contains data and information base aspects.

II. BROAD ASPECTS AND ELEMENTS OF AN EMPLOYMENT AND LABOUR PRODUCTIVITY POLICY

2.1 The general focus of a national employment and labour productivity policy should be aimed at meeting the needs of the nation and those of the workers through the provision and coordination of appropriate guidelines, regulations and strategies for the productive utilization of the entire population. It is useful that the policy package takes into account the distinction between (i) work and employment, (ii) manpower, workforce and total human resource potential, (iii) formal sector and informal sectoral income generation activities: given that different approaches may be required to address specific problems of say the young, aged, the able-bodied and the handicapped and those in corrective and healing institutions both for the sectors implied in (iii).

2.2 Employment and labour productivity policies should however be directed at two interrelated sub-programming areas: (i) the creation, promotion and management of employment opportunities and (ii) job/work structuring and the enhancement of labour productivity. The combined effect from the full realization of these two sub-programme areas would not only stimulate reinvestments for further productivity and employment enhancement, but could also lead to a favourable political, social and economic environment.

2.3 Of significance is that employment and labour productivity policy objectives, goals and strategies should be related to and consistent with other national policy objectives, goals and strategies so as to allow for efficient resource utilization and coordination. Those other policy areas include (i) education and training, (ii) manpower and national planning and (iii) national savings, investments and production. As a result of this general rule of thumb, there are three major considerations that should define the direction and scope of a national employment and labour productivity planning policy. These are:

(i) The enhancement of national productivity for the stimulation of national income and re-investment.

(ii) The enhancement of self-reliance in income and employment generation at the individual and national levels; and,

(iii) The development and promotion of a strategy for the mobilization, and utilization of the total population.

2.4 Certain steps strategies and techniques are required when national employment and labour productivity planning policies are being formulated and implemented. These are considered in the rest of this section with the view to provide guidance to employment and labour productivity policy formulators and implementaros.

2.4.1 Stepts and Strategies needed in the Identification and formulation of a comprehensive National Employment and labour productivity planning policy:

There are two major steps involved in the identification and formulation of national employment and labour productivity planing policy: (i) initiating action and (ii) discussion of drafted policies. Definite assignment of responsibilities in each of the areas with respect to over-all policies must be made to appropriate officers, avoiding overlaps a. d waste. These steps are as follows:

(a) initiating action.

(i) Determine the end result desired from the policy. What is the objective of this policy? Why is it necessary? What will it accomplish?

(ii) Gather all pertinent facts about the problem.

a) What is the present policy?

b) What are the problems about it?

c) What principles are involved?

d) What have other nations done about it?

e) How do other people in other institutions feel about it?

f) Who are the best qualified people in this field to talk to?

(b) Preparing a draft for discussion, developing content and a tentative outline.

a) discuss alternate courses of action

b) who will be affected by this policy?

c) who is finally responsible for the end results of this policy?

d) what will be the effect of this policy on the organization as a whole?

e) write down major concepts; discuss with appropriate persons for advise, clearances and suggestions.

d) develope revised draft for further discussions and recommendations.

Strategies:

A preferable strategy approach for the initiation of action and the draft preparation for discussion calls for a collaborative effort between the national employment and labour productivity policy making body and the various arms of Government responsible primarily for manpower planning and manpower development (education, health, social sources, agriculture, nutrition etc). The ultimate responsibilities for initiating, developing and recommending policies should rest largely on the staff of these respective agencies.

In the discharge of these responsibilities, certain elements need to be taken into consideration:

1. Establishment of the legal basis of the policy.

1.1 Review and cite relevant

- Manpower development and employment circulars
- Cabinet memoranda on human resources utilization
- Presidential Directives/Orders or Statements
- Related Chapters in the relevant/organization/regulations

1.2 Indicate appropriate aspects in the scope of the law within National Statutes and regulations, manuals and guidelines as issued by the overall human resource policy making and coordination body.

2. Establishment of the operational basis of the policy.

2.1 Review and cite substantive policy elements focusing on

(a) the objectives, strategies and functions of employment and labour productivity planning and programming.

(b) the administrative machinery for policy guidance and execution regarding

(i) reporting and evaluating content and their frequency

(ii) extent of inter-ministerial and inter-sectoral cooperation and collaboration in formulating and executing employment and productivity plans and programmes

(iii) the nature, scope and timing of activities to be undertaken to ensure maximum results.

3. Establishment of the Institutional basis of the policy.

Each responsible Agency/Institution, in collaboration with other relevant agencies and institutions, will have to develop adequate capabilities in three interrelated fields of specialization. Accordingly, the policy element should indicate the strategy and component for the development of institutional capabilities in the following:

3.1 Employment and labour productivity planning and programming- the ability to formulate, develop and integrate within national plans appropriate employment and labour productivity plans and strategies; and to identify and programme manpower utilization activities.

3.2 Employment and labour productivity policy formulation, coordination and evaluation- the ability to (a) diagnose policy implications and formulate policy measures from conducted labour and employment studies and surveys; and (b) monitor, coordinate, evaluate and report on the implementation of education, training, employment and labour productivity programmes.

3.3 Employment and productivity data and information collection and analysis- the ability to design, develop, administer and publish employment and productivity studies and surveys.

4. Establishment of lines of responsibilities for the policy.

Basic to the strategy is the need to clearly state who does what in relation to the formulation and execution of plans and programmes. Besides ensuring accountability, the exercise would provide for better coordination and resource utilization. Hence an employment and labour productivity planning policy should delineate and allocate advisory functions and responsibilities at (i) the national level (ii) the establishment level and (iii) the sectoral level.

Th The following general responsibilities and functions are suggestive guidelines which should be considered when formulating a national employment and labour productivity policy.

4.1 The President or Head of State

4.1.1 Overall supervision and control of national human resources of utilization.

4.1.2 Approval and transmittal to parliament/house of assembly or related reports and activities as prescribed by the employment and productivity laws of the nation.

4.1.3 Designation of presidential appointments and delegation of authority to Government agencies for initiating and executing employment and labour productivity enhancement programmes.

Employment and Labour Productivity

4.2 The Central Planning Agency

4.2.1 Programme, schedule, design, development and administer or coordinate employment and productivity studies and surveys in support of national human resources policies.

4.2.2 Analyse employment and other relevant studies and determine their policy implications to serve as inputs to the formulation of employment and labour productivity planning policies.

4.2.3 Monitor the implementation of manpower development and utilization policies.

4.2.4 Promote and coordinate the preparation, continuous review, evaluation and adjustments of manpower plans as provided for under the laws and provisions of employment and labour productivity planning policies.

4.2.5 Assist other agencies/institutions in the development of manpower and labour surveys and plans.

4.2.6 Provide technical advisory services to the Chief Executive on ways and means for strengthening the formulation and implementation of employment and labour productivity planning policies.

4.3 Public and private sector employers.

4.3.1 Provide the necessary data and information as required by law.

4.3.2 Develop respective employment and productivity planning policies and strategies to guide the development and utilization efforts of their respective staff.

4.3.3 Report to the central Employment and Labour Productivity Planning Agency on the implementation of Planning activities and programmes as contained in national development plans.

4.3.4 Participate in the identification and formulation of overall human resources policies.

2.4.2 Techniques and Actions Required for the Approval, Adoption and Release of the Approved Policies.

2.4.2.1 Employment and labour productivity planning policies identification and formulation are not ends within themselves for ensuring efficient utilization of a nation's human resource. Also of significance in the required policy administration is the establishment of actions that will result in (i) the approval and rectification of the formulated policies at the highest possible decision making level, (ii) the dessimination and interpretation of these policies to the concerned sectors and actors in the economy, and (iii) the overall commitment and actions to ensure the full implementation of the policies.

In initiating the required action, several trial and error techniques and questions are involved though their nature depends on the requirements and organization of a particular country. Among the most common of these are the following:

2.4.2.2 On the Approval of Policies

(i) Review proposed statement for accuracy, brevity and completeness - Is it necessary? Does it accomplish the objective for which it is designed?

(ii) Secure competent technical advice regarding the adequacy of the statement. Is it in conformity with acceptable practices within the Public Service? If not, does it cover the deviations desired? Is there further research required before it is recommended for adoption?

(iii) With whom should this policy be cleared before further action is taken? Have all necessary clearances and comments been secured by those affected by this proposal/policy? What are the differences in opinion, in order of importance, in the event there is lack of agreement on the part of all persons affected? Should further effort be made to secure a consensus before any action is taken?

(iv) What concurrences are necessary before this policy should be recommended for approval - by whom? Have all necessary concurrences been secured? If not, why?

(v) What is the highest point of authority required for final recommendation on this policy? Is this policy ready for review, and recommendation?

(vi) Who is authorized to approve this policy? Is the draft complete in every detail, with the required recommendation, and ready for consideration and approval?

(vii) When should this action be submitted to the approving authority?

(viii) What official records are required, and what notifications of approval are sent to whom?

2.4.2.3 On the release and interpretation of policies

(i) Determination of persons affected, co-ordination required.

(ii) Timing the release, and manner of release; is distribution of copy sufficient, or should group meetings be called for supplementary interpretations?

(iii) Day-to-day administration of the policy; who interprets what to whom?

(iv) Who administers exceptions to policy?

(v) Style and format of release, if not a standard policy manual issue?

(vi) Who spot-checks interpretations to esnure uniform understanding and acceptance?

2.4.2.4 On Commitments and Actions for the Implementation of Policies.

(i) Prescribing adequate regulations to assure uniform understanding and observance.

(ii) Designating respective responsibilities, authorities and accountabilities or carrying the policy into effect.

(iii) Clarifying administrative controls with respect to the policy; who is accountable for what controls established by the policy.

(iv) Reviewing and evaluating periodically all policies in effect; coordinating the whole process and making necessary adjustments.

III. ADMINISTRATIVE ASPECTS OF EMPLOYMENT AND LABOUR PRODUCTIVITY PLANNING FOR POLICY GUIDANCE AND COORDINATION

3.1 As indicated earlier, adequate institutional machinery and capabilities need to be developed at the national level if the objective of optimizing employment and labour productivity is to be achieved. Such an institution should benefit from the colaborative and cooperative efforts of various sectoral ministries, agencies and establishments within both the private and public sectors. However basic to the overall machinery is the need to establish a central employment and labour productivity agency to plan, coordinate, monitor and evaluate employment and labour productivity programmes and strategies.

3.2 In the establishment of the suggested agency, the issue of its location within the overall national administrative machinery needs to be taken into account. This choice centres around the question as to whether the Division/Agency should be autonomous or be placed within the Ministry of Economic Planning and Development or within the Ministry of Labour.

3.3 Generally there are three factors that are crucial to the making of this choice. These are:

(i) Member States' ability to establish and operate appropriate functional linkages between other national human resources planning and executing agencies;

(ii) The availability of adequately qualified national manpower and labour economists and statisticians;

and (iii) The structure and capacities of existing national machinery for the formulation, co-ordination and implementation of human resources planning, development and utilization policies and programmes.

3.4 Irrespective of the choice of location, the central employment and labour productivity planning agency/division must develop capabilities for (i) generating, analysing and presenting relevant statistics and information; (ii) planning, programming and formulating appropriate policies and (iii) monitoring, coordinating and evaluating employment and labour productivity policies, plans and programmes. A suggestive structure to perform these tasks together with their broad terms of reference is presented in figure 1 below.

IV. BROAD FUNCTIONS OF SECTIONS AND UNITS

4.1 Employment Planning, Programming and Policy Section

1. Initiate, develop and analyse labour market studies and make labour flow adjustments with emphasis on:

   (i) Programmes and strategies to deal with available and potential job opportunities within the economy together with the development of the corresponding skill requirements,

   (ii) Factors and policies (i.e. population growth rates, inadequate incomes, pricing and investment policies, unequal and inefficient distribution of investible resources, education and training policies, etc.) that influence labour supply and labour demand in both the urban and rural labour markets,

   (iii) Analysing the flexibility and ability of the economy to substitute labour and capital in relation to the mechanism governing the transfer of technology vis-a-vis its impact on increasing employment and national income opportunities.

2. Study and analyse (a) the nature and trend of internal and external labour mobility, (b) the nature, structure, operation, and potential of the formal and informal sectors of the economy, and (c) the content, institutions and policies for education and training with the view to initiate and develop measures and policies for (a) income generation and distribution (b) employment generation, promotion and distribution (c) increasing labour productivity and (d) managing non-national employees.

3. Develop and maintain a national system of jobs and skills classification and standardization together with a national Directory of Occupational Titles.

Fig. 1 Organizational Structure and Summary Functions

EMPLOYMENT PLANNING AND LABOUR PRODUCTIVITY DIVISION/AGENCY

- Planning, Programming and Policy Section
  - Planning and Programming Unit
  - Research and Studies
  - Policy Analysis and Formulation Unit
- Labour Statistics and Information Section
  - Surveys and Data Collection Unit
  - Data Processing and Information Unit
- Labour Allocation and Utilization audit Section
  - Labour Allocation Unit
  - Labour Producvitiy and Ecaluation Unit

Broad Function:

(a)

-Initiatve, develop, conduct and analyse labour market studies

-Study, analyse, standardize and adopt various labour force concepts relative to national problems

-Develop and maintain a system of jobs and skills classification

-Liaise with other institutions responsible for manpower planning, economic planning, educationa planning and investment planning.

(b)

-Assemble, analyse and publish Labour force and labour market statistics and information

-Design and conduct periodic income, establishment and labour force surveys and special studies

-Develop and maintain a national and non-national skill inventory

(c)

-Monitor, evaluate and report findings on employment and labour productivity strategies, policies, programmes and measures

-Develop and coordinate the operation of a manpower allocation scheme

-Laise with other institutions responsible for apprenticeship and on-the-job training, improving the physical and mental health of the labour force, instituting labour standards, and regulations

Output:

(a)

Employment and Labour Productivity Plans, Strategies and Policies

(b)

Reliable and up-to-date periodic manpower, Labour force and Labour market Statistics and Information

(c)

Formulation and Implementation of employment and Labour Productivity Programmes

4. Participate in the formulation and preparation of national and sectoral development objectives, policies and plans.

5. Define Labour Force concepts such as employment, underemployment and unemployment to ensure an easier identification and measurement of the various labour force categories.

(a) The Planning and Programming Unit

(1) Analyse income, establishment and labour force survey reports, data and projections and develop (i) programmes and strategies for meeting the identified needs, and (ii) a manual on skill classification and standardization;

(2) Specify the type, scope and nature of information required for the formulation of employment and labour productivity planning and if possible, participate in the design of the survey;

(3) Analyse and interpret demographic employment/manpower and education data with the aim to diagnose their employment implications for national development;

(4) Formulate, develop, analyse and prepare strategies for generating employment and incomes in the formal, rural/subsistance and informal sectors of the economy and for stabilizing the disequilibria in the labour market;

(5) Liaise with national planning machineries to harmonize employment generation plans with economic development plans.

(b) Policy Formulation Unit

(1) Study, analyse and prepare evaluation reports on incomes, employment and productivity and prepare operational guidelines for policy formulation;

(2) Appraise national and regional policies for economic and manpower development and income generation, employment, wage determination and establish functional linkages and consistencies among the policies for ensuring maximum output and reduction of duplicated efforts;

(3) Initiate and formulate broad employment, income and productivity objectives and policies for incorporation in (a) national development plans and (b) national manpower and education plans.

(c) Research and Studies Unit

(1) Study and analyse (a) the nature and trend of internal and external labour mobility, (b) the nature structure operation and potentials of the formal and informal sectors of the economy, and (c) the potentials for optimizing productivity while increasing employment in the subsistence/rural sector (d) policies and strategies for income generation and distribution, employment generation, promotion and distribution, labour productivity manpower supply capacities and capabilities;

(2) Develop and maintain a system of jobs and skills classification and standardization in the light of national and regional programmes and needs; and eventually evolve a national Directory of Occupational Titles;

(3) Participate in the formulation and preparation of national and sectoral development objectives, policies and plans with a view to assisting in crystalizing the employment generation goals within these policies and plans;

(4) Define and standardize those labour force concepts (i.e., employment, unemployment and underemployment) which describe the composition, structure, effectiveness, capabilities and potentialities of the labour force to ensure an easier identification and measurement of various labour force categories.

4.2 Labour Statistics and Information Section

1. Assemble, analyse and publish periodic labour force and labour market statistics and information so as to provide the needed data-base for effective national manpower, employment, education, training and productivity planning.

2. Design and conduct periodic income, establishment and labour force surveys with a view to:

(a) determine and project available and potential job vacancies and employment opportunities within the economy;

(b) determine and project statistical profiles of data and information on income distribution, occupational distribution and employment distribution as classified by demographic characteristics, industries and sectors;

(c) establish input/output coefficient metrics and relevant capital/ labour ratios by industry and sectors inorder to provide guide-lines for investment and consequently for employment creation;

3. Develop in collaboration with other appropriate agencies and maintain an inventory of total national skills (abroad and within) as well as non-national skills and employment.

(a° Surveys and Data Collection Unit

(1) plan and design in collaboration with the planning, programming and policy section, the nature, scope and dimensions of labour force and establishment surveys;

(2) programme, schedule and conduct periodic labour force surveys, establishment surveys and other related studies;

(3) identify resources and facilities for the conduct of labour force and establishment surveys/studies;

(4) in collaboration with the Planning, Programmes and Policy Section, determine, assess and/or identify the magnitude, types and coverage of required data for employment and productivity planning and policy formulation;

(5) collect, collate and store relevant data from other agencies and institutions.

(b) Data Processing and Information Unit

(1) Develop appropriate manuals for designing, conducting and processing of labour force and establishment survyes;

(2) Retrieve raw data, code, tabulate and present in accordance with specified classification and form for planning and policy formulation and implementation;

(3) Establish, develop and operate a viable labour force and employment data and information bank;

(4) Edit and publish labour force, employment and establishment surveys reports for general information.

(c) Labour Allocation and Utilization Section

1. Examine, institute and or execute possible strategies, and structural machineries for implementing a national vocational training programme including, apprenticeship and on-the-job training for employed workers, unemployed workers and school leavers;

2. Develop a manpower allocation programme aimed at matching relevant skills and jobs by establishing, operating and/or monitoring (a) an occupational and trade testing machinery; (b) a selective job placement and exchange scheme; and (c) a vocational counseling and career guidance service

3. Monitor, evaluate and report on income, employment and productivity measures within the context of overall national economic development so as to provide the necessary guidelines for the formulation and initiation of manpower utilization policies;

4. Collaborate with appropriate agencies on the identification and development of programmes that will improve the quality of life and the performance of workers through improved nutrition, better housing, medical and health care and social and job security.

(a) Labour Productivity and Evaluation Unit

(1) Create, monitor and co-ordinate vocational training on-the-job training and apprenticeship training programmes;

(2) Organize and conduct seminars and workshops focusing on government-employer, government-employee and employer-employee relationships and attitudes for ensuring maximum productivity;

(3) Work with appropriate agencies in the development and providion of social and job security and workers safety and health services;

(4) Produce seminar/workshop reports to form basis for labour productivity planning and policy formulation;

(5) Monitor and/or co-ordinate and evaluate the implementation process of adopted national employment and labour productivity policies and measures;

(6) Prepare evaluation reports and guidelines for enhancing the effectiveness of adopted policies and measures to ensure maximum utilization of the workforce.

(b) Labour Allocation and Utilization audit Unit

(1) Develop and maintain a sectoral registry of vacancies and job seekers, develop and execute a plan of action for matching the two;

(2) Develop and administer a scheme for an effective management of the movement of existing and prospective national and non-national employees within the economy;

(3) Design, establish and operate a national machinery that will (a) bring job seekers and available jobs together and (b) shift workers around, if necessary, for optimum results;

(4) Develop and conduct a national vocational counselling and career guidance programme;

(5) Develop and operate/co-ordinate a comprehensive occupational trade testing programme.

V. STAFFING REQUIREMENTS

5.1 The staff size for each section should depend upon (a) the size, composition and structure of the labour force; (b) the volume of work envisaged or to be performed; (c) the efficieny level of other labour force and manpower data collecting, processing and analysing agencies and (d) the availability of adequate financial and human resources. Be that as it may, the following should constitute the core of professionals from which the team could evolve if the output targets of the Division are to be met.

5.1.1 Division Head

The officer must be a qualified and experienced labour or manpower economist with considerable administrative experience. He/she must have the requisite status and authority to be able to relate effectively with other heads of departments and

organizations. In the absence of an experienced labour or manpower economist, the officer could be one of the following but should have had an appreciable level of traing in employment planning.

(a) Development Economist with emphasis in planning and/or industrial economics

(b) Labour or Manpower Statistician

5.1.2 Planning, Programming and Policy

In addition to specialized training in employment policy analysis and formulation and planning the officers must have at least an honours university degree in one of the following fields: (i) Labour Economics; (ii) Economic Development and Planning; and (iii) Personnel Management. As such, the staff should be composed of:

(a) Labour and Manpower Economists

(b) Development Economist and Planners

5.1.3 Statistics and Information Section

The combination of the following possessed with at least a professional degree, appropriate orientation, and a team of statistical assistants, should provide the core staffing requirement for the section:

(a) Applied and Mathematical Statisticians

(b) System Analyst and/or Computer Programmers

(c) Sociologists

(d) Labour Economists

5.1.4 Distribution and Utilization Section

Officers should have at least an honour university degree in

(a) Industrial or Labour or Manpower Economics;

(b) Vocational Education and Training;

(c) Sociology;

(d) Labour Union and/or Public Administration and

(e) Vocational Guidance and Education Counselling.

Consequently, the team should be composed of the following:

(a) Labour, Manpower and/or Industrial Economists;

(b) Vocational Training and/or Educational Planners;

(c) Sociologists and/or Vocational Guidance and Educational Counselling;

(d) Development Administrators.

VI. DATA AND INFORMATION REQUIREMENTS:

6.1 Effective allocation and utilization of human resources must be guided by a constant flow of data and information to fulfil the need in:

(i) job and skill matching

(ii) productivity analysis

(iii) analysis of labour force conditions

(iv) economic impact on the demand for labour and skills

(v) needs for training

(vi) career and occupational guidance and counselling

(vii) determination of new avenues for the creation of income generation activities

6.2 Information on the following are important to undertake any of the above:

(i) labour force

(ii) employment, unemployment and vacancies

(iii) labour mobility

(iv) economic

Type	Source	Relevance	Utility
Labour force	- Labour force surveys - Establishment surveys - Establishment records	Provides information on the size of the actual and potential workforce (employed and unemployed) by occupation, sex, educational attainment, geographical location, industry and sector	Used to provide a profile of the present labour force and potentials to supply skills to employers Used to determine levels and types of employment, under-employment and unemployment
Employment unemployment vacancies; wages	- Labour force surveys - Establishment records (including labour exchange records) - Establishment surveys	Provides information on current employment, unemployment i.e. demand for work; the current availability of labour and skills in the employment market The current or projected demand for skills i.e. vacancies The type of skills currently being utilized or in current demand by employers The current incentives system especially the wage rate	Guides skills classification; preparation of inventories; job/skill matching Planning for employment generation; Skill preferences of employers; Job preferences of workers and job-seekers and the push/pull factors created by prevailing incentives systems

Type	Source	Relevance	Utility
Labour mobility	Principally labour force surveys but also establishment records	Provides information on the movement of workers within the economy i.e. from rural to informal or formal sector (or vice versa) between production sectors i.e. agriculture, industry, services; between geographical areas	Important in determining the factors that attract labour from one geographical or production area to another Information can be used to push or pull labour to priority production areas or activities
Economic	National plans National Statistics Employment and vacancy statistics Establishment records Economic growth data	Provides information on the demand for labour and skills within the economy, by sector and by industry	Used to determine the overall or sector demand for labour, current levels of productivity etc.; is combined with the other types of information to determine current and future levels of employment and unemployment, future areas and types of labour and skill demand or over supply; is combined with other types of data to plan employment and productivity

6.3 Effective manpower utilization policies and programmes cannot be fully implemented unless all the requirements in data and information are fully met. To do so calls for allocations of resources to provide the necessary infrastructure and carry out the activities necessary to create, collate and analyse the data and information.

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STRATEGIES FOR LINKING EDUCATION/TRAINING INSTITUTIONS WITH CENTRES OF SOCIO-ECONOMIC ACTIVITY AND FOR MAXIMIZING RESOURCES UTILIZATION IN INSTITUTIONS OF HIGHER LEARNING

STRATEGIES FOR LINKING EDUCATION/TRAINING INSTITUTIONS WITH THE CENTRES OF SOCIO-ECONOMIC ACTIVITY AND FOR MAXIMIZING RESOURCES UTILIZATION IN INSTITUTIONS OF HIGHER LEARNING

Introduction

After more than two decades of independence, African educational system still appear antiquated, inequitable and ill-functioning. They are certainly ill-equipped to solving the African socio-economic crisis; and as events tend to show, they continue to create inequalities between and within societies; perpetuate the rural-urban drift, continue to lead to waste and inefficiency of resources, and are failing to equip the young with knowledge skills and attitudes conducive to self-reliance, productivity and self-fulfilment.

In spite of the massive investment in education and particularly in all forms of tertiary education, evaluation and appraisal of educational systems in Africa lead to the conclusion that the outputs of the systems do not possess the right kind of skills, knowledge and attitudes to help solve African problems.

Criticisms of educational systems have been pronounced in many quarters and one can only restate them. Generally, African educational systems are being attached because of: 1/

(i) the emergence of the problem of turning school leavers without vocational orientation; and therefore unable to find appropriate productive and socio-economic activities;

(ii) the continuing rise in the number of unemployable university graduates and the rising tendency for them to pick jobs unrelated to their fields of education and training and requiring lower qualifications;

(iii) the alienation of higher education products from communities and societies and the perpetuation of an elitist society;

(iv) the increasing exodus of school leavers to towns and cities in search of white collar jobs/employment and dislike for blue-collar or manual work;

(v) lack of greater opportunities for the gifted, mentally and physically handicapped youth where the systems are ill-equipped and ill-suited to respond to their special needs, thus nurture and develop whatever of the human resources is left;

(vi) the educational systems mobility to keep pace with more social demand for education and the limited educational opportunities available to youngsters;

1/ ECA: The Challenge of Education in the Socio-Economic Development of the African Region, Document ST/ECA/PAMM/HRP/7/81, August 1981 p.7.

(vii) the general failure of education in achieving those individual competencies necessary to lead a successful and creative life for economic growth with the consequence that Africa continues to import expertise;

(viii) educational experiences are too theoretical and classroom oriented, and are less practical and with less reference/relevance to the life around them;

(ix) students have no opportunity to experience the utility of the world of learning in an immediate way; and

(x) a lot of productive time capacity is foregone for too long when one has to study first then work later.

A closer look at these features indicates that they are bound to continue for the foreseeable future for a number of reasons. Among them are the unsuitability of the curricula to the socio-economic development problems; the neglect of vocational and technical education required in response to the needs of the economy; the emphasis attached to formal and general education at the expense of technical/vocational education, non-formal education; and the attendant quest for paper qualifications, the inappropriate teaching methods used by inadequately qualified and untrained teachers; and the terminal and dead-end nature of education at each of the tripartitions of the educational system. All these force many youngsters out of the educational system.

While these problems cut across the whole spectrum of the educational system, the analysis which follows is confined to third level education and training institutions. The strategies being proposed will be confined to possible linkage relationships between education/training institutions at third levels and the centres of socio-economic activities based on studies undertaken in some countries.

II. Studies on Maximizing Resources Utilization in African Institutions of Higher Learning

During the 1984-1985 biennium, studies were undertaken on maximizing resources utilization in African institutions of higher learning. These studies broadly:

(a) reviewed existing resources utilization and higher education development plans of the respective countries the organization and operation of higher institutions so as to explore the possibility of increasing the intake within the existing facilities in relation to:

(i) the manpower supply and demand in priority sectors of the economy and

(ii) the fields of study and faculties amenable for the learn/work exposure;

(b) made an assessment of the optimum utilization of resources in institutions of higher learning to determine instances of under-utilized resources: gaps of which could be filled thus, cater for increased intake, vocation-oriented and exposure as well as research and work-study programmes in the universities;

(c) assessed the possibilities for planned development, increased utilization through linkage of teaching-learning activities with those of centres of socio-economic activities within the immediate environs of the institutions; and highlighted on:

(i) strategies in force or possible for maximizing the use of instructional and residential facilities in the course of the year,

(ii) the number of days when staff was not teaching and not actually engaged in research teaching work during the year;

(iii) the magnitude of disuse of resources (human and material) and related it to the need for increased intake for higher education, and the maximum number of students that can be fully engaged by a faculty/department at any one single intake;

(iv) number of students with minimum entry requirements but denied access to institutions of higher learning due to lack of instructional and residential facilities and suggested ways of programming them in a programme of residential cum non-residential cycle of the year (work/vocation exposure) to maximize the use of facilities and link teaching/learning to related work exposure;

(v) evaluation of courses offered, their relevance to socio-economic needs, their organization and inputs in terms of men, material equipment and time;

(vi) evaluation of curriculum so that education received was work/job-oriented and linked to the world of work to allow for practical work exposure and guidance and recommended an operational strategy of collaborative consultation between the institutional administration, academic staff and centres of economic and social activities;

(vii) institutional consultations to establish the modality for interchange of student resident and non-resident work exposure for increased higher education intake through the use of graduate assistants and tutorial fellows combined with distance teaching techniques.

(d) The studies made recommendations on:

(i) resources required for increased intake to institutions of higher learning so that a good portion of the population has access to higher education;

(ii) identified sectors of the economy with critical manpower requirements so as to re-orient education and work exposure programmes to these critical areas;

(iii) operational strategies and modalities in respect of:

(a) higher educational orientation to economic needs including course offerings and instructional strategies;

(b) research oriented to socio-economic needs and production of goods and services;

(c) maximized use of staff, instructional and residential facilities;

(d) work-oriented education for learning while working or vice versa.

This paper is an attempt to propose strategies for the optimal utilization of resources in institutions of higher learning and for linking education/training institutional activities with industry and centres of socio-economic activity. It is not exhaustive because the problem is so vast.

III. Constraints in the Development and Utilization of Human Resources

Human resources development and in particular, education and training is an expensive undertaking which usually claims more than 4.5% of National GDP of African states. In spite of education and training being expensive, the demand for increased accessibility to educational and training opportunities continues to increase every year. African governments are being made to do with the existing physical facilities, staff and financial resources to meet the increasing demand for higher education and for more problem oriented research. The increase in demand for educational opportunities, has brought with it new problems such as that of outputs without the relevant knowledge and skills for national development.

Financial capital and recurrent expenditure inputs have become increasingly difficult and continue to be a major constraint. As a result, institutions of higher learning have been engaged in ways and means of utilizing their existing facilities, classrooms, lecture theatres, halls of residence, cafeterias, etc. and staff to meet the social demand for education. At the same time, institutions of higher learning are involved in finding ways and means of generating revenue for themselves. And most important has been the concern of such institutions to link their research and consultancy activities with industrial world and centres of socio-economic activities.

To do this requires a fresh thrust in the development of education and particularly at institutions of higher learning.

Given the foregoing analysis, it is possible to pose a few questions and perhaps elaborate on the same issues further:

(a) that educational personnel or resources available in our society are not being fully utilized because of relying too much on one single resource - the teacher/instructor/lecturer to facilitate the acquisition of knowledge, skills and values. There is a general failure of combining the services of a conventionally trained teacher with those of other resources and agents of change in the society;

(b) the rising costs of building, equipment and instructional materials continue to impose serious burden on national governments thereby putting a question on conventional approaches to the provision of education. A question may be asked as to whether the conventional three terms or two semesters a year are wanted in Africa to-day. Can the long vacation period be made use of so as to shorten on the period one takes to complete a degree/course. Perhaps the summer school ought to be institutionalized in most African countries.

(c) A third aspect is the issue of utilizing local resources - human and material. To what extent can African countries rely upon local resources in the development of education itself e.g. the production of textbooks cheaply and save countries on foreign exchange; on building materials and the production of spare parts badly needed in many African countries for national development;

(d) Given that institutions at whatever level are established for the service of society, is it not possible for universities and other higher education institutions to organize their educational activities for both the youth and adults around or closely associated with the centre of socio-economic activities such a factory, a farm, a shop, clinic or whatever industry is near so that colleges/institutions can become partially self-financing in linking their educational activities to such centres of socio-economic activities;

(e) A final issue relates to the question of reduction of external resources being used in African institutions - human and material. Africa is still heavily supported by external resources - finance and staff. Even the very industry one would like to link African institutions with may be heavily run and financed on multinational/transnational basis. The research one wants to conduct in an institution in collaboration with industry or centres of socio-economic activities may be to the benefit of foreign countries and companies. How are we to ensure that expatriate staff are not conducting research in collaboration with industry as spying devices for the benefit of western countries.

These questions of resources utilization and allocation to education and how best such resources should be utilized continue to be devil African states. The continent's problem in educational development is the lack of knowledge of what kind of educational actions would be effective in educational development and what strategies should be adopted to make them more effective. In this regard, therefore, there is need for innovative approaches to the development of education. More so if students/outputs of the system are to come out with relevant knowledge, skills attitudes and values. Thus the strategies being proposed hereunder reflect the concern and the direction one would like to see African education take.

What is being implied here is that Africa is capable of providing an education which is not only cost-effective, but an education that would give its society increased inventiveness and innovation; an education that would bring about a union or marriage between work and study and would combine knowledge with practice and production. In this way, the outputs of educational systems would be available for production services without too much recourse to pre-service training. To do this would require that our institutions of higher learning do not continue to be modelled on the linear expansion of colonial times but that there is a will (both political and moral) a determination and commitment to delve into our past and use it as a spring board for innovative actions for future developments.

We need to do this because many African countries have a number of qualified candidates for higher education but are often denied of access to institutions of higher learning because of the lack of instructional or residential facilities, the limited financial resources available for educational development, and the inability of African states to relate education to the demands of industry and other socio-economic activities.

Strategies for Innovative Forms of Educational Development

It is therefore being suggested that in order to deal with the demand for education by secondary school leavers, offer second chance education to those who are working and who left school for one reason or another, and to ensure that existing resources (human, financial and material) are fully utilized. African countries may wish to:

(i) seriously examine the rate of utilization of existing facilities in institutions of higher learning and propose measures for their optimal utilization. It is being argued that at present, there is a lot of under-utilization of facilities in institutions of higher learning and we intend to show in the analysis which follows a little later, the rate of underutilization in some institutions;

(ii) establish a link relationship between institutions of higher learning on the one hand and industries and centres of socio-economic activities on the other to ensure a practical and work oriented approach to education.

(i) Rate of Utilization of Facilities

It is being proposed that a number of institutions of higher learning are being under-utilized and could very well do with additional students. Much argument has been put forward by academic staff that they are overworked and that existing facilities are over-utilized, the staff over loaded with periods and have little time for research. Yet the examples we have here clearly show the rate of utilization to be very low.

(a) Take the case of the University of Liberia which operates on a bi-semester system. The school year runs from mid-February or early March to mid-December with a break of 1 1/2 to 2 weeks in July separating the two semesters. Each semester is 16 weeks long, a total of 32 weeks for two semesters in a year - including national and impromptu holidays. This means that only 32 weeks in a year are for teaching and examinations. If we allow four weeks for marking of scripts, we are left with 16 weeks of holidays for staff and 20 weeks of holidays for students. This means that 38.5% of student time is spent on holidays.

The official schedule of the University of Liberia is from 8:00 a.m. to 9:00 p.m. five days a week. This gives a total of 60 hours a week of teaching time, and a total of 960 hours per semester and 1920 hours a year. In reality, however, most classes operate from 8:00 a.m. to 4:00 p.m. five days a week i.e. 35 hours a week and 560 hours per semester and 1120 hours per year.

A first degree programme offered at the University requires a total of 4,480 hours of teaching and examination time, involving 4 academic years of 32 weeks each, and each week containing 35 hours. It should be emphasized that these calculations represent the actual situation at the University of Liberia of more than 80% of the academic activities and programmes. This analysis also shows that 41.7% of available hours for teaching and examinations is not utilized by the University of Liberia. It represents a total of 800 hours unused in a year and 3,200 hours in a four year programme. (See Table I below)

Table I: Available Time in the University of Liberia

Scheduled hours per week (5 days)	60 hours
Actual hours used per week	35 hours
Unused hours per week	25 hours
Scheduled hours per semester	960 hours
Used hours per semester	560 hours
Unused hours per semester	400 hours
Scheduled hours per year	1920 hours
Used hours per year	1120 hours
Unused hours per year	800 hours
Scheduled hours for 4 year course	7680 hours
Used hours for 4 year course	4480 hours
Unused total hours in 4 years	3200 hours
% hours unutilized in all cases	41.7%

From the above information it seems possible for the University of Liberia to reschedule its programmes in blocks of 12 weeks a semester and 24 weeks a year for one group of students, and another 24 weeks (12 weeks each semester) for a second group. The actual situation would work out as follows:

First Group:	1st Semester	12 week	March - May
	Break	3 days	
	2nd Semester	12 weeks	June - August
	Vacation	1 1/2 weeks	
Second Group:	1st Semster	12 weeks	Sept. - Nov.
	Break	3 days	
	2nd Semester	12 weeks	Dec. - February
	Vacation	1 1/2 weeks	

This proposal calls for 24 weeks of teaching and examinations for a first degree programme, but to obtain an optimal utilization of classrooms as the case is now, it will be necessary to increase the hours per day to 9 1/2 hours working from 8:00 a.m. to 7:00 p.m. in all colleges of the university and allowing 1 1/2 hours lunch break. This scheduling provides for 47 1/2 hours a week for classes and can be translated into 570 hours per semester and 1140 hours per academic year of 24 weeks. In a four year programme the time used for instruction and examination would be 4560 hours. If this rescheduling is

compared with Table I, it will be seen that time allocated for instruction and examinations is 570 hours per semester instead of 560; 1140 hours instead of 1120 hours a year and 4560 hours in four years instead of 4480 hours.

At present, the average teaching staff teaches 6 to 12 hours a week or 192 to 384 hours per academic year. Assuming that every staff were to teach 12 hours a week i.e. 384 hours a year on the basis of the present semester of 16 weeks, and that no increase were to be made to staffing establishment, the two group approach just proposed would increase teaching loads in the University of Liberia to 576 hours a year - assuming that a staff member teaches 12 hours a week in groups one and two of two semester each. Such a load is too much and unreasonable.

To offset this teaching imbalance, it would be necessary to increase staff establishment by 50% of the present strength and maintain that each staff teaches the standard 12 hours a week. This would bring down the staff teaching load from 576 hours a year to 384 hours a year.

In 1982, enrolment in the University of Liberia was 3,285 and was projected at 3953 in 1987. In 1983 an enrolment of 3,533 was recorded. In terms of costs for a two group intake with 24 weeks per academic year, the unit teaching costs would drop in spite of 50% increase in teaching staff. In actual terms, financing of two group of students in the University of Liberia poses a few problems.

First, the University is currently being under-financed without more students being brought in. Library facilities are not adequate and support services are seriously under-financed. Second, university policy has been since 1978 to decrease the number of teaching assistants and increase senior staff especially at professional level. This increase in senior staff would affect the costs of education especially unit costs. However, in spite of these probelms, the cost implications of a 24 week academic year as opposed to the present 32 weeks a year would be as shown in Table 2.

Table 2: Comparative Cost Estimates for a 24 and 32 Week Academic Years based on 1983 Costs

	Normal 32 week per year	24 weeks per year (2 groups)
Number of students	3,533	7,066
Number of staff	298	447
Ratio of students to staff	11:8	15:8
Direct teaching cost	$2,295,202.00	$3,442,803.00
Teaching support cost	1,601,378.00	2,402,067.00
Research	122,523.00	183,784.00
Library	199,750.00	299,625.00
Workshops	50,000.00	75,000.00
TOTAL ACADEMIC	4,268,853.00	6,403,279.00
Teaching cost per student	1,208.27	906.20
Personnel services	1,150,000.00	1,725,000.00
Other services	1,122,947.00	1,684,420.00
Materials, supplies & equipment	220,000.00	330,000.00
Subsidies	368,001.00	552,001.00
TOTAL ADMINISTRATION	2,860,948.00	4,291,421.00
TOTAL RECURRENT	7,129,801.00	10,694,700.00
GROSS COST PER STUDENT	2,018.08	1,513.54

Source: University of Liberia

It will be seen from the above table that the direct teaching costs per student in a 32 week academic year is $1,208.27 as opposed to the 24 weeks academic year of $906.20. The gross cost per student for a 24 week academic year would be 75% of the current gross cost per student i.e. US$1,513.54 as against $2,018.05 in Table 2.

(b) A second case for illustration is the resources utilization in the University of Addis Ababa. The structure and operations of this University lend themselves to the under-utilization of resources. The University is complex and highly centralized with campuses

strewn over several provinces and separated by hundreds of miles. Centralization has tended to lead to under-utilization of instructional facilities. A second aspect is the rate of student attrition which also contributes to a lot of under-utilization of resources in a number of colleges, and faculties of science and technology. For instance, attrition rates for the University have been as follows:

Table 3: Rates of Student Attrition in Addis Ababa University

Year	Total No. of Students	No. Dismissed	% Dismissed
1979/80	11,103	579	5.4%
1980/81	10,968	846	7.7
1981/82	10,896	695	5.5

Source: Higher Education Commission

Inspite of these constraints, a case can be made for increasing university enrolment and its intake. The normal working day of the University of Addis Ababa is from 8:00 a.m. to 4:00 p.m. Tuesdays through Fridays. On Mondays, it operates from 8:00 a.m. to 2:00 p.m. so that the rest of the day is left for ideological discussions; and on Saturdays it runs from 8:00 a.m. to 12 noon. Evening classes run from 5:00 p.m. to 8:00 p.m. daily - Monday through Friday. On the basis of this, the University takes 42 hours a week for day classes.

If the University of Addis Ababa were to run classes from 8:00 a.m. to 5:00 p.m. Monday through Friday, giving exceptions for only those lecturers involved in ideological discussions on Mondays, it could increase the hours per day to 9 hours and to a 49 hour week. This figure is much lower than the one of 60 hours a week for the University of Liberia. Addis Ababa University technically operates from 8:00 a.m. to 8:00 p.m. since evening classes which start from 5:00 to 8:00 p.m. every day Monday through Friday constitute a major activity of the University.

On the basis of 9 hours a day of room use Monday to Friday and 4 hours on Saturday, the potential and actual classroom utilization was calculated and tabulated in Table 4. This table gives a detailed room by room account of the number of hours each room is used in a day and throughout the week.

In the Institute of Language Studies and Faculty of Education (A in Table IV), none of classrooms 102 to 431 is used more than 7 hours a day. Only two or three classrooms appear to be effectively utilized - rooms 232 and 233. Room 232 is used 7 hours each Wednesdays and Fridays and Room 233 used 6 hours each day on Mondays, Wednesdays and Fridays. Many of the other rooms ware used two or three hours a day leaving them idle for most of the day. The Social Science centre (B in Table IV) seems better utilized than the Institute of Language Studies. Quite a number of rooms are used for 6 hours a day and in particular Rooms 9-11; 9-12 and 9-17 are effectively utilized each day, averaging more than 60% of room use per day.

While many rooms in the Technology Centre (C in Table 4) are not used at all on many week days, those that are used are being effectively utilized. Of the total number of 24 rooms in this centre, (No. E118 to 320), fourteen of them are not at all fully utilized. This is more than 50% of the facilities available which are lying idle.

In the Science Faculty, the situation is slightly better, although here too the facilities are very much under-utilized. Rooms No. 242 and 244 are never used during the whole week, and Room 407 only once a week. On the other hand, the College of Agriculture (E in Table IV) has many rooms used at least 8 hours a day - a utilization rate of 88.9% per day. The two junior colleges of Awassa and Debre Zeit are not very much under-utilized. More use could be made of them especially Awassa College with a little more of students and if need be an increase of 50% of staff.

Table 4: Potential and Actual Classroom Utilization per Day in Addis Ababa University (in hours)

REGULAR PROGRAMME

Institute of Language Studies and Faculty of Education Ist Semester 1981/82 (Room)	POTENTIAL HRS						ACTUAL HOURS					
	WEEK DAYS						WEEK DAYS					
	M	T	W	TH	F	S	M	T	W	TH	F	S
102	9	9	9	9	9	4	3	1	3	1	3	-
103	"	"	"	"	"	"	3	2	3	-	-	-
117	"	"	"	"	"	"	2	-	2	-	-	-
118	"	"	"	"	"	"	1	3	1	3	1	-
204	"	"	"	"	"	"	3	2	3	2	2	-
215	"	"	"	"	"	"	2	4	2	5	2	-
216	"	"	"	"	"	"	4	-	4	-	3	1
217	"	"	"	"	"	"	1	2	1	2	1	-
218	"	"	"	"	"	"	1	4	1	2	1	-
219	"	"	"	"	"	"	5	2	5	3	5	1
232	"	"	"	"	"	"	5	4	7	1	7	-
233	"	"	"	"	"	"	6	4	6	3	6	3
303	"	"	"	"	"	"	4	4	4	2	4	-
304	"	"	"	"	"	"	4	4	5	3	4	4
308	"	"	"	"	"	"	4	2	4	1	4	-
319	"	"	"	"	"	"	3	3	3	3	3	-
320	"	"	"	"	"	"	4	4	4	3	4	-
321	"	"	"	"	"	"	4	4	4	4	6	-
322	"	"	"	"	"	"	5	4	4	4	5	1
334	"	"	"	"	"	"	4	4	4	4	5	-
335	"	"	"	"	"	"	3	5	2	3	4	2
416	"	"	"	"	"	"	3	6	3	6	-	-
418	"	"	"	"	"	"	3	2	4	2	2	-
419	"	"	"	"	"	"	2	3	2	3	2	-
431	"	"	"	"	"	"	4	5	4	4	4	1

Table 4 (contd.)

Social Science Centre Ist Semester 1981/82 (Room)	POTENTIAL HOURS WEEK DAYS						ACTUAL HOURS WEEK DAYS					
	M	T	W	Th	F	S	M	T	W	Th	F	S
101	9	9	9	9	9	4	4	5	4	3	4	1
107	"	"	"	"	"	"	6	3	6	3	5	-
108	"	"	"	"	"	"	4	5	4	3	4	-
109	"	"	"	"	"	"	6	1	6	1	6	-
110	"	"	"	"	"	"	4	3	4	6	4	-
111	"	"	"	"	"	"	2	2	-	-	-	-
112		"	"	"	"	"	2	3	2	2	2	-
113	"	"	"	"	"	"	3	5	4	1	4	-
114	"	"	"	"	"	"	2	3	2	2	2	-
115	"	"	"	"	"	"	5	3	5	2	5	1
116	"	"	"	"	"	"	5	5	6	4	6	1
117	"	"	"	"	"	"	2	2	2	2	2	-
118	"	"	"	"	"	"	3	2	3	2	2	-
119	"	"	"	"	"	"	6	7	6	5	6	-
120	"	"	"	"	"	"	3	1	5	2	5	-
121	"	"	"	"	"	"	4	1	4	3	4	-
122	"	"	"	"	"	"	6	2	6	3	6	-
9 - 6	"	"	"	"	"	"	3	3	3	2	3	-
9 - 7	"	"	"	"	"	"	4	5	4	6	4	-
9 - 8	"	"	"	"	"	"	2	2	2	1	4	2
9 - 9	"	"	"	"	"	"	1	4	2	1	2	2
9 -10	"	"	"	"	"	"	1	2	1	-	2	-
9 -11	"	"	"	"	"	"	5	5	5	7	5	-
9 -12	"	"	"	"	"	"	6	7	7	6	7	2
9 -13	"	"	"	"	"	"	4	5	3	4	3	-
9 -14	"	"	"	"	"	"	4	3	4	-	-	-
9 -15	"	"	"	"	"	"	-	1	2	-	-	-
9 -16	"	"	"	"	"	"	3	2	2	4	3	-
9 -17	"	"	"	"	"	"	6	5	8	4	7	2
9 -18	"	"	"	"	"	"	6	4	6	2	6	"
9 -19	"	"	"	"	"	"	3	5	2	3	3	1

Table 4 (contd.)

Technology Northern Campus 1st Semester 1982/83 (Room)	POTENTIAL HOURS						ACTUAL HOURS					
	WEEK DAYS						WEEK DAYS					
	M	T	W	TH	F	S	M	T	W	TH	F	S
E 118	9	9	9	9	9	4	2	-	1	-	-	2
E 121	"	"	"	"	"	"	4	7	7	7	6	-
E 122	"	"	"	"	"	"	-	-	-	-	-	-
E 131	"	"	"	"	"	"	5	6	6	6	7	-
E 132	"	"	"	"	"	"	-	-	-	-	-	-
PD 112-40	"	"	"	"	"	"	3	-	-	4	-	-
PD 108-40	"	"	"	"	"	"	3	-	-	-	4	-
PD 110-35	"	"	"	"	"	"	-	-	-	-	-	-
C 212-76	"	"	"	"	"	"	7	7	7	7	7	-
C 213-40	"	"	"	"	"	"	7	7	6	6	6	-
C 214-40	"	"	"	"	"	"	7	7	7	7	5	-
No. 4	"	"	"	"	"	"	-	-	-	-	-	2
C 215-60	"	"	"	"	"	"	5	4	5	6	6	-
C 224-60	"	"	"	"	"	"	-	-	-	-	-	-
C 206-96	"	"	"	"	"	"	3	4	6	6	3	-
CD 203-39	"	"	"	"	"	"	-	-	3	-	4	-
C 205-37	"	"	"	"	"	"	-	-	-	-	-	-
C 201-43	"	"	"	"	"	"	-	-	3	-	4	-
M 311-20	"	"	"	"	"	"	-	-	3	-	4	-
M 310-35	"	"	"	"	"	"	-	3	-	2	-	-
M 318-64	"	"	"	"	"	"	9	9	9	9	9	4
MP 321-40	"	"	"	"	"	"	-	-	-	-	-	-
MO 330-43	"	"	"	"	"	"	3	2	3	1	3	-
320	"	"	"	"	"	"	3	2	3	1	3	-

Table 4 (contd.)

Science Faculty Ist Semester 1982/83 (Room)	POTENTIAL HOURS WEEK DAYS						ACTUAL HOURS WEEK DAYS					
	M	T	W	TH	F	S	M	T	W	TH	F	S
B 1/1	9	9	9	9	9	4	1	5	8	8	8	1
B 1/2	"	"	"	"	"	"	4	7	7	5	7	-
B 2/1	"	"	"	"	"	"	2	6	4	6	-	-
B 2/2	"	"	"	"	"	"	4	7	7	7	7	-
B 3/1	"	"	"	"	"	"	4	7	7	5	7	-
B 3/2	"	"	"	"	"	"	5	1	3	4	7	-
Hall 1	"	"	"	"	"	"	4	7	7	5	6	-
" 2	"	"	"	"	"	"	4	4	4	3	4	-
" 3	"	"	"	"	"	"	3	1	3	3	3	-
" 4	"	"	"	"	"	"	4	4	4	2	5	-
Room 201	"	"	"	"	"	"	4	8	4	5	4	-
" 202	"	"	"	"	"	"	4	6	3	2	1	-
" 203	"	"	"	"	"	"	4	6	1	2	-	-
" 205	"	"	"	"	"	"	4	6	1	2	-	-
" 207	"	"	"	"	"	"	7	4	1	2	-	-
" 301	"	"	"	"	"	"	3	4	1	4	1	-
" 302	"	"	"	"	"	"	3	5	1	1	-	-
" 303	"	"	"	"	"	"	3	4	1	-	-	-
" 305	"	"	"	"	"	"	3	1	2	3	2	-
" 306	"	"	"	"	"	"	4	1	1	2	1	-
" 307	"	"	"	"	"	"	4	3	4	2	4	-
" 401	"	"	"	"	"	"	3	2	1	1	-	-
" 242							-	-	-	-	-	-
" 244							-	-	-	-	-	-
" 402	"	"	"	"	"	"	3	2	-	2	-	-
" 406	"	"	"	"	"	"	2	2	-	2	-	-
" 407	"	"	"	"	"	"	1	-	-	-	-	-
" 408	"	"	"	"	"	"	3	2	3	-	-	-
" 409	"	"	"	"	"	"	5	-	1	-	-	-

Table 4 (contd.)

		POTENTIAL HOURS						ACTUAL HOURS					
E	College of Agriculture 2nd Semester 1981/82 (Room)	WEEK DAYS						WEEK DAYS					
		M	T	W	TH	F	S	M	T	W	TH	F	S
	I-7	9	9	9	9	9	4	8	8	8	8	8	6
	I-16	"	"	"	"	"	"	2	2	2	2	2	-
	I-19	"	"	"	"	"	"	8	5	8	5	8	-
	II-5	"	"	"	"	"	"	8	8	8	8	8	-
	II-6	"	"	"	"	"	"	8	8	8	8	8	-
	II-14	"	"	"	"	"	"	8	8	8	8	8	-
	II-15	"	"	"	"	"	"	8	8	8	8	8	-
	III-5	"	"	"	"	"	"	5	5	8	5	8	5
	III-10	"	"	"	"	"	"	8	5	8	5	8	-
	III-11	"	"	"	"	"	"	3	5	8	5	8	-
	LTH-1	"	"	"	"	"	"	8	5	8	5	8	-
	LTH-2	"	"	"	"	"	"	8	8	8	8	8	-
	ENG-1	"	"	"	"	"	"	5	5	5	5	5	-
	2	"	"	"	"	"	"	8	5	8	5	8	-
F	Awassa Junior College 2nd Semester 1981/82 (Room)	M	T	W	TH	F	S	M	T	W	TH	F	S
	1	9	9	9	9	9	4	2	4	4	4	3	-
	2	"	"	"	"	"	"	3	4	3	3	1	-
	3	"	"	"	"	"	"	-	2	3	1	2	-
	4	"	"	"	"	"	"	3	3	3	4	3	-
	Auditorium	"	"	"	"	"	"	4	4	4	4	3	-
	AET	"	"	"	"	"	"	4	3	3	4	3	-
	HST	"	"	"	"	"	"	3	3	3	2	1	-
G	D. Zeit Junior College 2nd Semester 1981/82 (Room)	M	T	W	TH	F	S	M	T	W	TH	F	S
	1	9	9	9	9	9	9	6	6	6	6	6	2
	2	"	"	"	"	"	"	6	6	6	6	6	2
	3	"	"	"	"	"	"	5	5	5	5	-	-
	4	"	"	"	"	"	"	4	5	4	5	-	-
	5	"	"	"	"	"	"	3	2	3	2	3	-

The rate of under-utilization shown in Table 4 becomes more pronounced when these figures are translated into percentages. For instance in the Faculty of Education, room 102 with a potential capacity of 49 hours a week is only used for 11 hours in a week i.e. a utilization rate of 22.90%. This room is not used for evening classes just as much as some other rooms such as 103, 117, 118 and 204 are not used for evening classes. All these have a utilization rate of 25% or less so that 75% or more of their hourly use is wasted each week.

In the same Faculty of Education (see Table 5(A) most of the rooms are better utilized for evening classes than for day programmes. In this Faculty only Room 232 gets a utilization rate of 50% in the week; and the rest have a rate of less than 50%. Yet in the evening, the classes have 55% or more utilization rate. It seems logical therefore to suggest that a third of the students can be put into the Faculty of Education without additional instructional facilities.

In the College of Agriculture, however, except for Room I-16, almost all rooms are used - 69% or above in a week. A good number are used for 81% of the time available. The situation is not as favourable in the two junior colleges of Awassa and Debre Zeit where the rate is less than 50% for most of the rooms. The three colleges offer no evening classes and therefore the rate of utilization is far less than the one shown in Table 5 (B) (C) and (D).

The under-utilization of facilities can be calculated to determine the potential capacity available in the University of Addis Ababa. For instance the Faculty of Education has a total capacity at present of 1949. If each of those facilities were to be fully utilized in a week i.e. 49 hours a week, a total capacity of 1949 times 49 is theoretically possible. But students are only required to take an average of 15 credit hours in a week. There is therefore a potential capacity of 1949 x 49 over 15 credit hours a week (Table VI). The analysis in this table reveals a lot of unused capacity in the University of Addis Ababa. For instance, in the Faculty of Education, it is possible to offer up to a maximum of 6,364 credit hours. Theoretically, the University of Addis Ababa can put in 6,364 students in the Faculty of Education; 708 students in the Faculty of Law; 3,658 in the College of Agriculture; 7,974 in the Science Faculty; and 4,874 students could join the freshman's programme. These are only theoretical figures but they tell a lot of the unused capacity of the University of Addis Ababa. In practice, however, it would not be possible to put into the University this number of students because of some of the bottlenecks which operate in the University.

Among these bottlenecks which would make optimal utilization of resources difficult are the limited dormitory/hostel facilities, libraries, laboratories and operational finance; and above all, human resources. At present, the University continues to experience a shortage of qualified academic staff, and an increase in student intake may put more strain on existing staff.

Table 5: Rate of Classroom Utilization for Regular and Evening Programmes in Addis Ababa University

	Institute of Language Studies and Faculty of Education (Room)	Regular Programme (2nd Semester 1981/82) Potential hours per week	Actual hours per week	Rate of utilization	Evening Programme (1st Semester 1982/83) Potential hours per week	Actual hours per week	Rate of utilization
A	102	49	11	22.90	27	-	-
	103	"	8	16.32	"	-	-
	117	"	4	8.16	"	-	-
	118	"	9	18.70	"	-	-
	204	"	12	25.0	"	-	-
	215	"	15	30.60	"	15	55.55
	216	"	12	25.0	"	18	66.66
	217	"	7	14.25	"	16.30	60.38
	218	"	9	18.70	"	18	66.66
	219	"	21	42.86	"	15	55.55
	232	"	24	50.0	"	18	66.66
	233	"	25	51.0	"	18	66.66
	303	"	18	37.50	"	15	55.55
	304	"	24	50.0	"	3	11.10
	308	"	15	30.60	"	3	11.10
	319	"	15	30.60	"	18	66.66
	320	"	19	38.70	"	15	55.55
	321	"	22	45.80	"	18	66.66
	322	"	23	49.0	"	10.30	38.00
	334	"	21	42.86	"	-	-
	335	"	19	38.70	"	3	11.10
	416	"	18	37.50	"	-	-
	418	"	13	26.50	"	-	-
	419	"	12	25.0	"	-	-
	431	"	22	45.80	"	7.30	27.00
B	College of Agriculture (Room)						
	I-7	"	48	98.0	"	-	-
	I-16	"	10	20.40	"	-	-
	I-19	"	34	69.40	"	-	-
	II-5	"	40	81.60	"	-	-
	II-6	"	40	81.60	"	-	-
	II-15	"	40	81.60	-	-	-

Table 5 (contd.)

College of Agriculture (Room)						
III-10	49	34	69.40	-	-	-
III-11	"	34	69.40	-	-	-
III-13	"	34	69.40	-	-	-
LTH-1	"	34	69.40	-	-	-
LTH-2	"	40	81.60	-	-	-
Eng-1	"	25	51.0	-	-	-
Eng-2	"	34	69.40	-	-	-
C Awassa Junior College (Room)						
1	"	17	34.70	-	-	-
2	"	14	28.55	-	-	-
3	"	8	16.74	-	-	-
4	"	16	33.48	-	-	-
Aud.	"	19	38.72	-	-	-
AET	"	20	40.80	-	-	-
HST	"	12	24.50	-	-	-
D Debre Zeit Junior Co. (Room)						
1	"	32	66.96			
2	"	32	66.96			
3	"	20	40.80			
4	"	22	45.00			
5	"	13	26.53			

Table 6: Potential Capacity of Classrooms in Addis Ababa University

1. Regular Programme

INSTITUTE OF LANGUAGE STUDIES AND FACULTY OF EDUCATION

Total Capacity = 1949
total periods per week Univ. in Session = 49
average credit hours taken per student per week = 15
potential capacity of classes = $\frac{1949 \times 49}{15}$ = 6364 students (credit hr. per week) 1/

LAW FACULTY

Total Capacity = 240
total periods per week Univ. in Session = 49
average credit hours taken per student per week = 15
potential capacity of classes = $\frac{240 \times 49}{15}$ = 703

SOCIAL SCIENCE CENTRE

Total Capacity = 1995
total periods per week Univ. in Session = 49
average credit hours taken student per week = 15
potential capacity of classes = $\frac{1995 \times 49}{15}$ = 6517

TECHNOLOGY (NORTHERN CAMPUS)

Total Capacity = 1028
total periods per week Univ. in Session = 49
average credit hours taken per student per week = 15
potential capacity of classes = $\frac{1028 \times 49}{18}$ = 2798

SCIENCE FACULTY

Total Capacity = 2440
total periods per week Univ. in Session = 49
average credit hours taken per student per week = 15
potential capacity of classes = $\frac{2440 \times 49}{15}$ = 7971

1/ HPW hours per week

Table 6 (Contd.)

FRESHMAN PROGRAMME

Total capacity = 1492
total periods per week Univ. in Session = 49
average credit hours taken per student per week = 15
potential capacity of classes = $\frac{1492 \times 49}{15}$ = 4874 students (credit hours per week)

TECHNOLOGY (SOUTHERN CAMPUS)

Total Capacity = 273
total periods per week Univ. in Session = 49
average credit hours taken per student per week = 15
potential capacity of classes = $\frac{273 \times 49}{15}$ = 892 " "

SCHOOL OF PHARMACY

Total Capacity = 674
total periods per week Univ. in Session = 49
average credit hours taken per student per week = 15
potential capacity of classes = $\frac{674 \times 49}{15}$ = 2181 " "

COLLEGE OF AGRICULTURE

Total Capacity = 1120
total periods per week Univ. in Session = 49
average credit hours taken per student per week = 15
potential capacity of classes = $\frac{1120 \times 49}{15}$ = 3658 " "

AWASSA JUNIOR COLLEGE

Total Capacity = 611
total periods per week Univ. in Session = 49
average credit hours taken per student per week = 15
potential capacity of classes = $\frac{611 \times 49}{15}$ = 1996 " "

Teaching Load of Addis Ababa University

The University of Addis Ababa rules stipulate that academic staff should have a minimum teaching load of 12 periods of 50 minutes duration per week, three periods of which ought to be devoted to research. In addition, for each teaching period, a lecturer is expected to spend three hours in classroom related activities. The University also recognizes the fact that meaningful instruction cannot take place when the number of students a university staff teaches exceeds 75 per week in a freshman year and 45 in all subsequent years. A partial profile of staff teaching load is shown in Table 7.

Table 7: Staff Teaching Load of Addis Ababa University: 1st Semester 1981 (A Partial Profile)

Department	No. of Periods Per Week Per Staff	No. of Students per Staff per week
Biology	10	132
Chemistry	9	206
Geology	9	87
Mathematics	7	122
Physics	7	126
Statistics	7	149
Agri. Engineering	5	82
Agri. Economics	5	132
Animal Science	4	166
Plant Science	4	93
Arts and Science	4	207
Mechanical Engineering	8	69
Curriculum & Instruction	10	205

An examination of Table 7 reveals that all staff have a work load below the University's minimum of 12 periods a week. If an allowance is made for three periods devoted to research to be included in the weekly teaching loads, only the Departments of Biology and Curriculum and Instruction would have staff with a teaching load of 13 periods a week. The Departments of Chemistry and Geology would have a teaching load of 12 periods - the minimum allowed by the University. The rest of the departments in Table 7 have less than 12 periods a week. In effect therefore, staff in the University have a light load which falls short of the minimum required by the statutes. More significant is the fact that between 1974 and 1980, some 400 research

undertakings had been completed i.e. roughly 67 research completed each year which is not a lot if consideration is taken of the fact that a staff must devote three periods a week to research.

It sounds logical to conclude that academic staff can take in more teaching loads of at least two to three periods a week to meet the required minimum of 12 periods a week. It could also be argued that the three periods devoted to research should be reduced to two if not one, since interested staff can still do their research during the long vacation. On the basis of table 7, it can be proposed that teaching staff loads can be increased by 33.3% without unnecessary burden to the staff of the University, and since student facilities do exist, Addis Ababa University can technically increase its enrolment by say 40% with minimal cost increases.

In Table 7, the number of students per staff per week does not refer to say, a Biology class of 132 students; but refers to the total number of students the staff teaches in one week. These numbers were made up of various classes taught by each lecturer.

Linking Education/Study Programmes to the World of Work and Industry

In proposing a strategy for linking educational institutions to industry and centres of socio-economic activities, it is assumed that in a four year programme, students follow a general education programme during the first two years. A student wishing to pursue a bachelors degree in the sciences would therefore undertake a programme similar to the one here:

Major: Chemistry; Minor: Physics

Freshman Year

First Semester		Second Semester	
Course	Hours	Course	Hours
English	5	English	3
Foreign Language	3	Foreign Lang.	3
Mathematics	4	Mathematics	4
Chemistry	4	Chemistry	4
Physics	3	Physics	3
Physical Education	1/2	Physical Education	1/2
General Sub.	1	General Sub.	1
Total Hours	18 1/2		18 1/2

Sophomore Year

First Semester		Second Semester	
English	3	English	3
Foreign Lang.	3	Foreign Lang.	3
Mathematics	4	Mathematics	4
Chemistry (1)	3	Chemistry (1)	3
Chemistry (2)	4	Chemistry (2)	4
Physics	1	Physics	1
Total Hours	18		18

Junior Year

First Semester		Second Semester	
Introduction to Lib St.	3	Introduction to Soc. Sci.	3
Philosophy	3	Physics	3
Physics	3	Chemistry (1)	4
Chemistry	4	Chemistry (2)	3
Elective	3	Mathematics	3
Total	16	Total	16

Senior Year

First Semester		Second Semester	
Biology	3	Biology	3
Chemistry (1)	4	Chemistry (1)	4
Chemistry (2)	4	Chemistry (2)	2
Chemistry (3)	3	Mathematics	3
Chemistry (4)	2	Elective	4
Total Hours	16	Total Hours	16

In the above proposals, students would delve into their major and minor areas of specialization during the third and fourth years of study. These proposals do not cater for students of Medicine whose programme would take a different form considering the practical element involved.

Some university programmes such as agriculture, teaching, law, and engineering require more practical work outside the confines of the University campas. In the strategy being proposed, it is being suggested that students should do their theory part of the programme in twenty four weeks and go on practical attachment for another twenty four weeks and the remaining four weeks of the year should be for holidays/vacation.

In order for the work programme to be effective, it must reinforce the students academic programme and relate it to the manpower development programme of the country. It is for this reason that each university will have to set a quota for the number of new students to be admitted in relation to the country's manpower needs. Some programmes would have to take in more students than others to reflect on the country's critical manpower requirements. The quotas would have to be reviewed periodically to ensure that the graduates from higher institutions are being absorbed by the job market in both the private and public sectors and that the manpower needs of the country are being met.

For this programme to work, there should be a board comprising of representatives from higher institutions, the Ministry of Education, Industry and other centres of socio-economic activities and the Ministry of Planning or the Ministry responsible for human resources planning, development and utilization. This board would have to ensure, through established machinery, that each student serves twenty four weeks of practical work at least twice before graduating.

During the first and second years of education, work attachment should be geared towards general societal issues or areas involving less specialization. In Africa where illiteracy is still very high and problems associated with poverty and under-development continue to plague the continent, students should be engaged in these areas for their work attachment. A major area of concern therefore would be to use students in the first and second years in literacy programmes would be able to instruct adults in such areas as farming techniques, child care, nutrition and insanitation.

In community work, students should help with improving refuse disposal methods, improving drinking water through the construction of wells and boreholes, construction of pit latrines, bridges across streams and improvement to pathways.

In general the work/study programme in which higher institutions can collaborate with the public, industry and centres of socio-economic activities would be concentrated in these areas:

1. Social and Community Work

Students to be attached to the Ministries of Labour, Local Government, Social/Welfare and Community Development; voluntary agencies, special institutions, relief and rehabilitation agencies, church organizations etc. Their work would include helping the aged and handicapped, deliquent children; community services, literacy classes, sanitation and other services.

2. Teaching and Other Social Services

Students should be attached to the Ministry of Education or any other ministry with responsibility of educational activities. Their work would involve teaching both the young and adults, teaching formal classes in primary or secondary schools; making teaching aid and equipment. They should also be engaged as research assistants at research institutions.

3. Business

Students should be attached to industry and other centres of socio-economic activity to work as assistants in business houses and establishments, shops, and warehouses. They could work as clearing clerks, accounts assistants and engaged in salesmanship of goods.

4. Scientific Work

Students of science should be attached to scientific and industrial concerns such as chemical, processing and petroleum plants as laboratory assistants, analysts; or be engaged in the treatment of water, or scientific experiments and surveys, and veterinary services.

5. Engineering

Students should be sent to the Ministries of Public Works; Land, Mines and Energy and Rural Development to help with rural development programmes, ruad building and construction; in surveys, mining geological work, designing and the development of solar energy for use by rural communities.

6. Agriculture

Students of agriculture should work as agricultural researchers; company technical assistants, and wood industry technical assistants. They should help with farming, plant pathology, poultry, veterinary services and agricultural production.

A point to be emphasized here for linking education to the world of work is that each group of students should complete a year's academic programme in six months instead of the traditional eight months of study. This proposal is not to be regarded as a sandwich course of study and work attachment but an innovative approach to normal repertoire of educational development.

The scheme would operate on the basis that while one group of students is in college, the other is on work attachment to industry and various centres of socio-economic activity. Two things are of paramount importance, viz:

First, the work-study programme require the full co-operation and collaboration of institutions, industry, the public and private sectors. Industry and other centres of socio-economic activities as to inject into the scheme some finance by way of allowances payable to students. Undoubtedly this would increase the operational costs of industries and the government, but this would be offset by the practical experience gained by students and the contributions made to industry by them.

A second aspect of the work-study programme is that the work element should be the subject of assessment and should form part of the overall assessment and should count in the final grade. Students should be made to write a report on their work attachment which should be assessed. To ensure that work attachment is done properly, students records should be well kept. In addition, there should be a team of supervisory staff made up senior industrial management, institutional, public and private staff - being representatives from sectors with a stake and interest in the work programme.

In practice, if we consider each course that operates a conventional three years of three terms or three years of two semester each, the course can be translated into two groups entry system by dividing the academic year into 4 terms of 12 weeks each as follows:

Group I:	1st Term	
	Study	12 weeks October-December
	Break	3 days
	2nd Term	
	Study	12 weeks January-March
	Vacation	1 1/2 weeks
	3rd Term	
	Work	12 weeks April-June
	Vacation	1 1/2 weeks
Group II:	1st Term	
	Study	12 weeks April-June
	Break	3 days

2nd Term

Study	12 weeks July-Sept.
Vacation	1 1/2 weeks

3rd Term

Work	12 weeks October-December
Break	3 days

4th Term

Work	12 weeks January-March
Vacation	1 1/2 weeks

If we assume that the academic session consists of 32 weeks with 35 hours a week of possible teaching time being available from Monday to Friday then a conventional three year degree programme takes (2x32x35) hours in three years i.e. 3360 hours available for teaching and examining. In the proposal being made of 24 weeks a year of two terms of 12 weeks each, the hours could be extended to 50 hours a week i.e. 8:00 a.m. to 8:00 p.m. a day allowing 2 hours of lunch break. In a three year degree programme of two terms of 12 weeks each and fifty hours, the hours available for teaching and examining would be (3 years x 2 terms x 12 weeks x 50 hours) 3600 hours in three years. In extending teaching hours to 50 hours a week, it does not mean that staff teach for 50 hours a week, but that facilities are available for instruction for ten hours a day.

If the 50 hours is considered too much, a lot could still be achieved in a 24 week academic year if the working day starts from 8:00 a.m. to 6:30 p.m. allowing for 1 1/2 hours of lunch break i.e. 45 hours a week for 5 days. This gives a total of 324 hours for teaching and examination which compares well with the conventional 3360 hours of 35 hours a week.

By having a year of 24 weeks made up of two terms of 12 weeks each, universities could admit three batches of students a year. This would overstretch the teaching staff and hence this sytem would call for an increase of at least 50% in staff establishment. This would allow teaching staff loads to remain favourably around 12 periods a week as is the case in most cases to-day.

Conclusion

In the foregoing analysis attempt has been made to highlight the problems of resources utilization in institutions of higher learning in Africa and how institutions could link their study programmes to the world of work. In particular attempt has been made on how institutions can utilize their existing facilities by allowing more students to come in and tie this increase in students with a work-study programme.

A major proposal has been that higher institutions can arrange their teaching programmes into two terms each of 12 weeks for a total academic year of 24 weeks instead of the conventional 32 weeks a year. This proposal also carries with it the suggestion that upon completion of the programme in 24 weeks, students should go on an attachment programme for another 24 weeks. The remaining 4 weeks in the year is to be used for vacation time. A second aspect has been that an admission of students into two batches will call for an increase of staff by 50% to ease the teaching load of staff.

Of greater significance to this proposal is the fact that pressure on the linear university expansion would be greatly eased. At the same time, the work-study programme would make education more job/work oriented to the needs of society and would give the students some practical experience very much needed at the end of their study course. Perhaps what is needed in this proposal is the will and commitment both institutions and industries to collaborate in educational innovation. For without the will and commitment, there can never be a start.